1971

TEXTILE MUSEUM JOURNAL

Volume III, Number 2 December, 1971

Eastern Hemisphere
Curatorial Offices

CONTENTS

Articles

Kazak Rugs
by Raoul Tschebull 2

A Second Type of Mughal Sash
by Milton Sonday and Nobuko Kajitani 6

Chavin Textiles and the Origins of Peruvian Weaving
by William J Conklin 13

Some Weft-Float Brocaded Rugs of the Bergama-Ezine Region
by May H. Beattie 20

Designs in Sumba Textiles, Local Meanings and Foreign Influences
by Monni Adams 28

Book Reviews

Öz: Turkish Textiles and Velvets *and*
Geijer: Oriental Textiles in Sweden
by Walter Denny 38

Erdmann: Seven Hundred Years of Oriental Carpets
by Charles Grant Ellis 42

McMullan/Reichert: George Walter Vincent and Belle Townsley Smith Collection of Islamic Rugs
by W. Russell Pickering 43

Hubel: The Book of Carpets
by Anthony N. Landreau 44

Briefly Noted 45

Board of Trustees and Staff 46

CHAVIN TEXTILES AND THE ORIGINS OF PERUVIAN WEAVING

William J Conklin

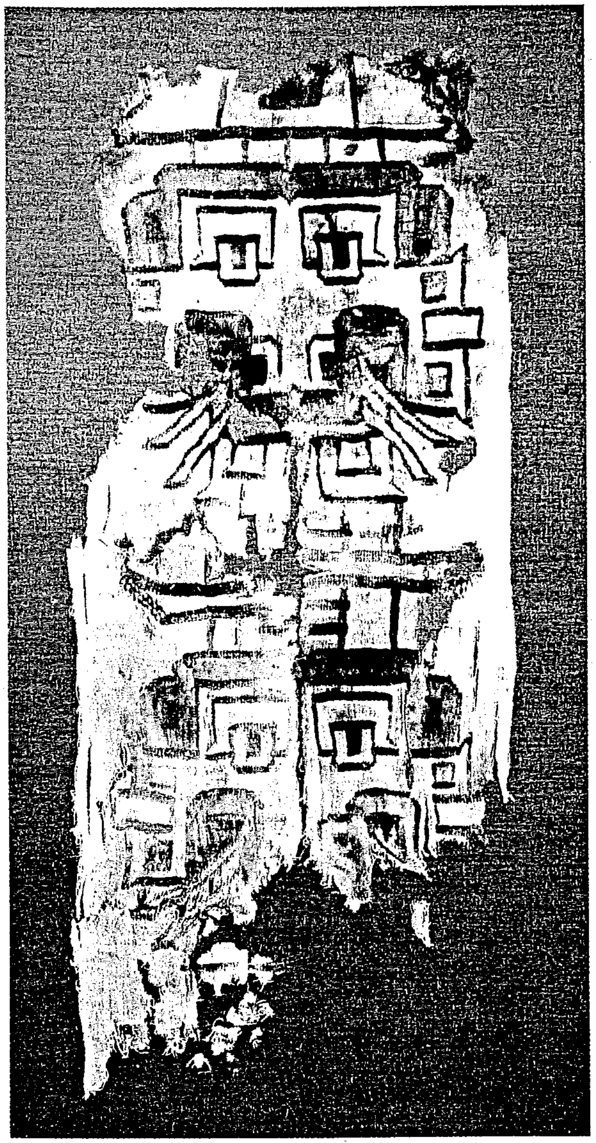

Fig. 1 Textile fragment from the Chavin culture of ancient Peru. Found in a South Coastal burial, the textile was probably woven in the highlands about 800 BC ± 200 years.

When the first contact was made between the native civilizations of the Americas and the Spanish conquistadores, the Europeans recorded with astonishment the quality and importance of the textile arts then existing in Mexico and in Peru. But although they were amazed, especially at the art of the Inca textiles in Peru, they would have been even more astonished if they had known that this local textile history extended virtually as far back in time as their own European textile history. The textile fragment with which this paper is primarily concerned (Fig. 1) was designed and woven when Greek civilization was still in its pre-Athenian period, and the kingdoms of Mycenae and Tiryns still flourished, roughly the period 1000 BC to 600 BC. No comparable textiles from Greece have been preserved.

Ancient Peruvian history is very complex and by no means yet entirely revealed by archaeological investigation. Roughly within the area today known as Peru, hundreds of pre-Columbian cultural periods are definable as distinct in time and place. Most of these are characterized by an art style that was confined to a single valley and lasted but a few generations. However, three times during the millennia prior to European contact, Peru seems to have felt the impact of a very broad-scale and inclusive culture. The last of these, the Inca culture, called the Late Horizon, existed when the Europeans landed. A second, called the Middle Horizon, with centers at Tiahuanacó and Wari, existed from perhaps 600 AD to 1100 AD (Sawyer 1963; Conklin 1970). The first all-inclusive Peruvian culture, called the Early Horizon, had its most important generative site in the highlands of Peru near what is now a small village called Chavin de Huantar. This Chavin culture seems to have dominated much of Peru during the first half of the millenium before Christ. The intervals between these Horizon styles are broadly called the Intermediate Periods.

This Early Horizon of ancient Peruvian history, initially traced by the visual evidence of its remarkable art style, has proven to be a period of great technical creativity as well. Many of the arts of later periods received their religious imagery and mythological content from this Chavin culture, but the arts also experienced major technical transformation during the period of Chavin influence. A whole family of sculptural and ceramic techniques was invented by the generation which felt the influence of this first pan-Peruvian movement. However, much less is known about the transformation which occurred during this period in the field of textiles. Mary Elizabeth King has noted however that "the major development of Peruvian weaving took place during this time" (King 1965).

Textiles created during the Early Horizon have been recovered from a few archaeological sites under controlled stratigraphic conditions, providing at least some rungs for a ladder of textile history during this period. A subsequent brief review of that information will provide a framework for the analysis of the textile with which this paper is primarily concerned: that is, a textile fragment reportedly found in a deep tomb (3 meters) near Chincha in the hills some 15 kilometers inland from the Paracas peninsula. These burials also reportedly contained numerous painted textiles, basketwork and in one instance a brick-red, broad ceramic bowl with a fish representation engraved on its inner surface. The bowl was apparently very similar to some found in the Ofrendas galleries beneath the Chavin temple (Lumbreras 1965-66). The textile fragment can be related to the stylistic sequences for Chavin de Huantar proposed by Rowe (Rowe 1967) as well as to South Coast ceramic sequences and thus may be helpful in correlating information concerning the Early Horizon.

Construction

The fragment is constructed entirely of cotton, the basic

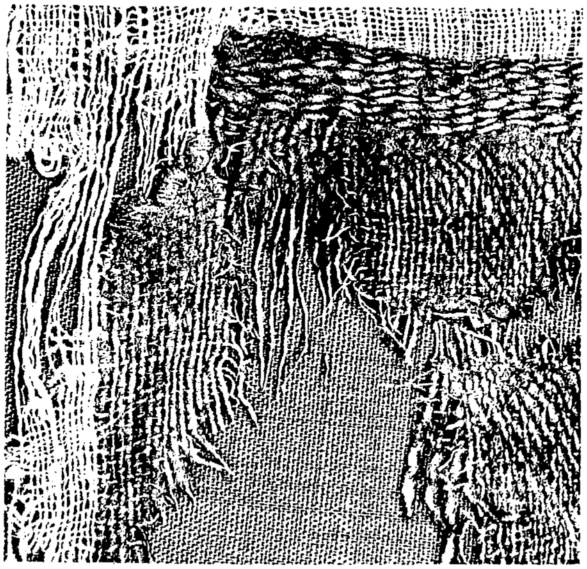

Fig. 2 One of the unusual weaving techniques used was warp wrapping. Dyed cotton was wrapped around individual natural cotton warps to form the colored areas of the design.

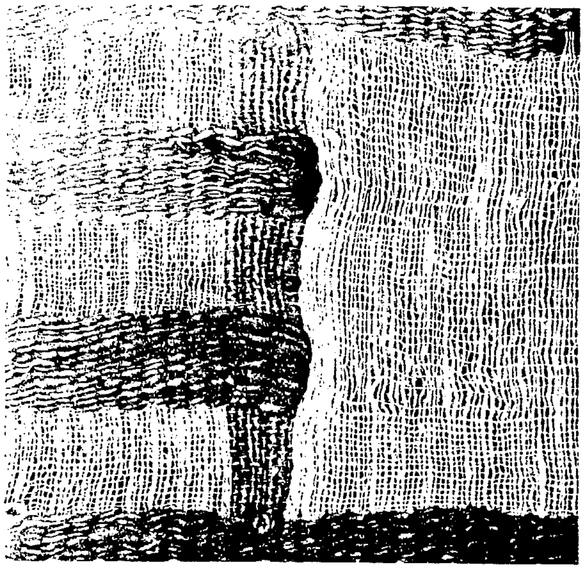

Fig. 3 Horizontal lines in the design were formed of dyed cotton supplementary weft.

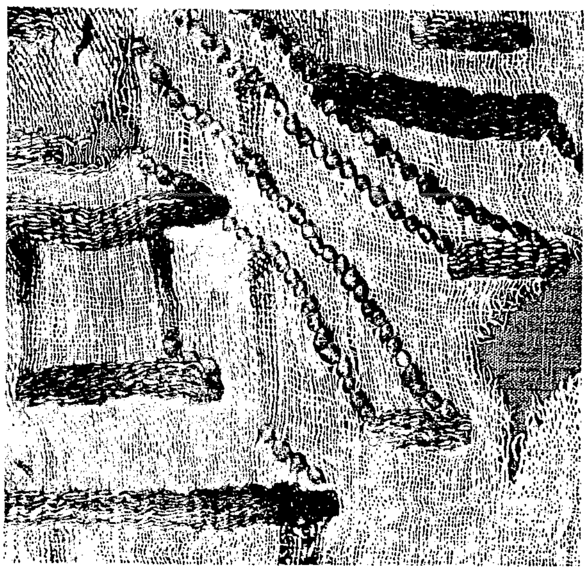

Fig. 4 Diagonal lines, such as those that form the fangs, are actually a series of small cotton balls wound on the warp.

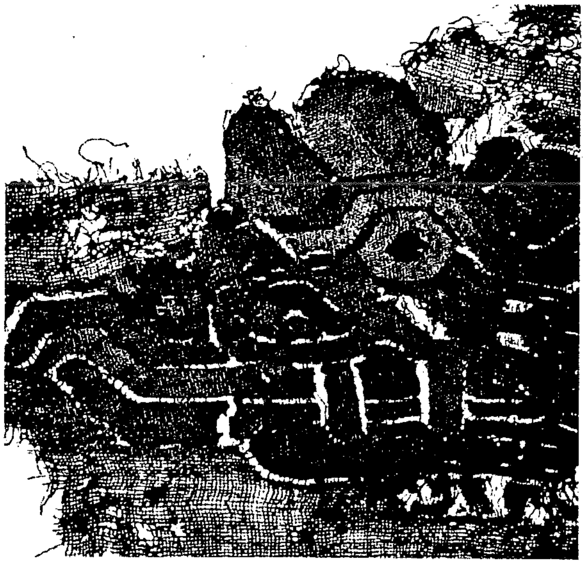

Fig. 5 Textile fragment discovered during archaeological excavations at Supe, Peru 1941-42. This Chavin condor-feline profile face is the earliest example yet discovered of pre-Columbian tapestry, now in the American Museum of Natural History in New York. 41.2/5517.

structural technique, a plain weave. The two weft selvedges define a width of 30 centimeters, and both show evidence of adjoining textiles. In the warp direction the fragment is some 74 centimeters long, both ends are irregular, and neither shows evidence of warp selvedges. The warp is single-ply, Z-spun and spaced regularly at 50 per inch across the width of the textile. The weft, which is also single-ply, Z-spun cotton, has widely irregular spacing characteristics, varying in different areas from perhaps 20 to over 50 plies per inch. A two-ply, Z-spun, S-plied thread is used to attach the adjoining textiles. Otherwise no two-ply yarns occur.

Four colors of cotton occur: the natural white or cream-colored cotton used for the basic fabric; natural brown cotton used for figurative definition; and two colors of dyed cotton, rose red and yellow. In addition to the basic plain weave, three unusual structural techniques are used. The first of these is warp wrapping. All colored infill areas in the design and all vertical lines used for figurative definition in the design are accomplished by wrapping each individual warp thread with cotton fibers of the appropriate color before weaving (Fig. 2). Thus, each warp-wrapped thread has a layer of colored unspun cotton on the outside and a core of plain white, spun cotton on the inside.

A second technique is used for all horizontal lines in the composition. Brown cotton yarn is used in the creation of local areas of weft-faced plain weave over quadrupled warps (Fig. 3). This technique can be called supplemental weft, discontinuously employed, since the normal weft of the fabric is deflected in these areas. We shall refer to it for purposes of this discussion as the "horizontal line" technique.

But in addition to the vertical and horizontal line systems, there is a third technique used for the creation of diagonals. Structurally a perfect cross between the other two systems, it consists of warp wrapping like the vertical system, but instead of a single warp, four warps, as in the horizontal line system, are wrapped together (Fig. 4). Each wrapping, then, forms a small cotton ball or dot in the design which is offset vertically by two wefts and horizontally by four warps. This structural and formal discipline for the creation of the lines and areas of the design is consistent throughout the textile.

Historic Background

During the Pre-ceramic Period before the influence of Chavin the predominant costal weaving process was twining, according to Bird (Bird 1952). Twining is a weaving process which involves the turning of groups of two or more elements of the same set about each other to enclose successive elements of the opposite set (Emery 1966). This process involves finger manipulation of the weft and can not be created by the use of the heddle loom. Bird has reported that in the Pre-ceramic Period levels at the Huaca Prieta, nearly 80 percent of all recovered fragments were created by this technique (Bird 1951-52). Portions of textiles which utilize plain over and under weaving also occur in the pre-ceramic levels of the Huaca Preita, as well as in other contemporary sites, but Bird believes that these were also created by finger manipulation.

In the levels yielding Chavinoid pottery at three different sites, Ancon, Supe and a location near the Huaca Prieta, large quantities of plain-weave textiles have been found. These fabrics with their straight wefts and uniform texture demonstrate unmistakably construction by the heddle loom. Though none of these plain-weave textiles which have been excavated under controlled conditions are identifiable iconographically as Chavinoid, there are in various museums several painted textiles with Chavin configurations in similar heddle loom woven cloth. In general, the identification of the invention of new weaving methods with this general period seems unmistakable. But none of the excavated textiles and hence their processes, however, have been identified clearly enough with definite phases of the Early Horizon to enable us to be more exact.

The only textiles so far recorded which show Chavin iconography by a structural technique are two similar fragments recorded by O'Neale (Fig. 5) (O'Neale 1954). The bird heads represented can be readily related to Chavin art styles. These fragments, which were excavated from Chavin levels of the Lighthouse site at Puerto de Supe, are constructed by using a mixed variety of tapestry techniques on plain weave made of Z-twisted yarn.

The Weaving Process

With this as a brief background, we may now consider two possible explanations for the process used in the weaving of the textile fragment here being considered. Certain overlapping of individual techniques used in the textile establish necessary sequences for the construction and therefore limit possible processes. (1) The weft always goes around the horizontal elements and dots, never through them. (2) The weft is always outside of the wrapped warp. (3) Horizontal elements always cover one end of a warp-wrapped element, but not the other.

The first possible weaving process is one which does not depend on the use of the heddle (Fig. 6). The weaving process would be as follows: (1) the warp was strung on the loom bars; (2) the warp was wrapped where the design called for vertical lines and colored infill areas; (3) the horizontal lines and dots were woven onto the quadrupled warps; (4) after the design was thus completed, the weft was then inserted by a needle throughout the textile, tying all the elements together into a structural network. This process would parallel certain pre-ceramic processes found at the Huaca Prieta, where the creation of plain-weave fabrics seems to have been accomplished without heddle controlled warp and where the invention of the structure of plain weaving seems to have preceded the use of the heddle (Bird 1952).

This sequence, particularly the last step, would be very arduous, but this in itself does not preclude it. The friction between yarns being drawn through the wrapped portions of the warp would possibly damage the fiber wrapping.

However, a second process suggested by Irene Emery (personal communication 1971) is possible and assumes an

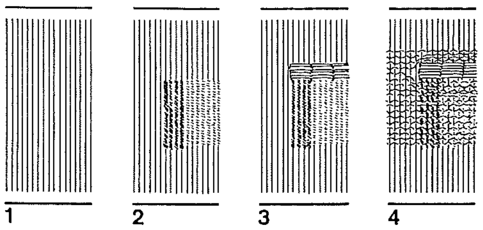

Fig. 6 The Chavin warp-wrapped textile could have been created without the use of the heddle loom by this sequence. After the design elements were created (as in 2 and 3), the weft might have been needle inserted (as in 4).

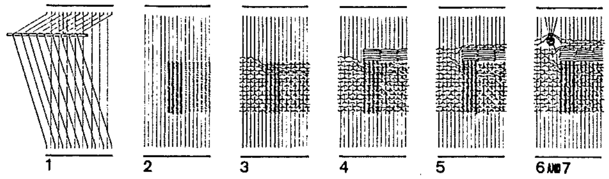

Fig. 7 If the use of heddles and sheds is assumed, a more likely weaving sequence can be proposed, with the weft woven in as the design proceeds (as in stages 3, 5, and 7).

elementary use of heddles and the separation of the warp into two sheds of alternating sets (Fig. 7). The use of this process assumes that warping was followed by: (1) separating the warp into two sheds, then in a typical area of the textile; (2) wrapping the warp where the design calls for vertical lines and infill colors up to that point in the design where horizontal elements are required; (3) weaving the weft, using heddles, through the section just wrapped; (4) insertion of the weft required for the horizontal lines, utilizing finger manipulation of the warp and not heddles for shed separation; (5) weaving the next required limited section of weft using the heddles for shed separation; (6) creation of the wrapped ball for the required diagonal element, by finger manipulation; (7) again utilizing the heddle to weave a small number of wefts, followed by a repetition of a similar sequence for the next design area.

Both the first process described and this second process technically satisfy the overlapping conditions, but the second process, which utilizes heddles, provides a logical explanation for the observation that the horizontal elements cover only one set of ends of a warp-wrapped section. The second process establishes a sequence of an initial horizontal element, followed by warp wrapping, followed in turn by the second horizontal element which was then capable of covering the adjacent end of the warp wrapping. This sequence, then, not only satisfies all of our requirements, but it also establishes the direction in which the textile was woven. The textile was woven from the top of the figure downward, since this overlapping always occurs at the bottom of warp-wrapped elements. The weaver, while weaving, then, saw and designed the textile with the faces upside down.

The weaving process undoubtedly made elementary use of sheds and heddles. The resulting product, even though well executed, has inherent structural deficiencies—primarily the necessarily extremely irregular weft (see Fig. 3). The necessary deflection of all structural weft around the ends of the horizontal elements limits absolutely the width of any horizontal line in the design, thus causing characteristic modular bands. The Chavin influenced pottery of the South Coast Early Horizon also demonstrates such modular banding (Menzel, etc. 1964) but without any structural explanation.

The twist of threads has been considered as possibly having regional and temporal significance. Pre-ceramic spinning seems to be either entirely S-spun or mixed S and Z. Textiles from stratigraphic levels attributed to the Chavin Horizon from coastal sites are mixed Z and S. Paracas textiles are predominately Z-spun as are most later South Coast textiles. This textile, as well as all other textiles having clear Chavin iconography, has Z-spinning, thus seeming to establish a Z-spinning influence on Peruvian weaving in time and place. Z-spinners must have come from Chavin and have influenced the South Coast far more than they did the North Coast.

History of Warp Wrapping

Warp wrapping has been noted as a technique in other textiles from Peru, though in more elementary forms. The latest evidence chronologically of warp wrapping occurs in Nazca times, fragments of which are preserved in the Textile Museum. Prior to this are two related textiles, one from Cahuachi and one attributed to Paracas. Still earlier are the fragments from near the Huaca Prieta which were associated with Cupisnique style Chavin sherds.

The Cahuachi mantle now in the Field Museum, illustrated but not noted as warp wrapping by O'Neale, contains a repeated pattern of what was then assumed to be a flower (O'Neale 1937). The warp wrapping is simple, without any terminal lines or other techniques. The design element though, much as it may resemble later Nazca flower designs painted on pottery or as marked in the desert, is most probably derived from a deity face.

A famous earlier textile found in 1910 and the inspiration for Tello's work at Paracas was first recorded by Levillier in 1928 (Fig. 8). This textile, now in the Brooklyn Museum, utilizes warp wrapping for the repeated pattern of the front-face deity in its central section. The technique is limited, though, to the wrapping of single warps and is relatively poorly executed. This central section stands in contrast to the technically astonishing and highly animated border (Fig. 9). Perhaps the border represents new local deities and new weaving techniques, with the central section representing the old technical and iconographic traditions from Chavin.

However, from the Cupisnique levels of deposits near the Huaca Prieta excavated by Junius Bird, appear several fragments of warp wrapping, now in the American Museum of Natural History, two of which will be noted here.

The first is a technically excellent product constructed of two-color warp wrapping with the second color used for lines now largely missing (Fig. 10). The design has not been ascertained, but it is rectangular, constructed entirely of cotton which has been dyed in rose red color for wrapping and left in its natural state when used as a core. Both warp and weft are double S-ply, Z-spun.

The second is also well executed with the same materials and spins but contains a large and complex design; two loom widths are joined together, and the warp end of the textile is fringed (Fig. 11). Close examination reveals, though the colors have virtually disappeared, structural elements identical to the Chavin textile which we are considering. Warp wrapping is used for solid color areas, inserted weft for horizontal elements with the structural weft diverted and, finally, wrapped cotton balls are used to form diagonals. The designs on this textile have not as yet been deciphered.

Design Analysis

The design composition of the textile which we are primarily considering is as formal and symmetrical as the weaving system. The representations are composed vertically in a manner unknown in South Coast weaving although obviously similar to the vertical design compositions of the steles and columns of Chavin de Huantar. Two frontal deity faces are joined by a continuous mouth band. The faces have certain feline characteristics but are far removed from generalized realistic representations. The mouths are agnathic but have five fangs all extending from the upper jaw. This multiplication of selected realistic animal parts as a means of intensification is characteristic of Chavin art. The heavy-lidded eyes stare straight at the beholder, their form echoing that of the snarling, upturned mouth and enlarged nostrils (Fig. 12). The pupils

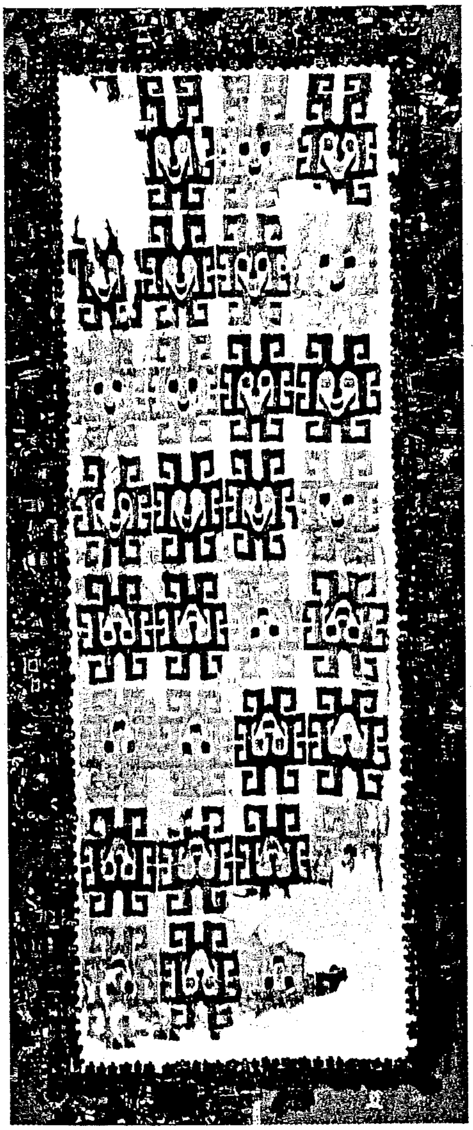

Fig. 8 This mantle from the Paracas peninsula in southern Peru utilizes warp wrapping for the repeated figure in the central field, a technique probably carried on from the earlier Chavin tradition. The Brooklyn Museum. 38-121.

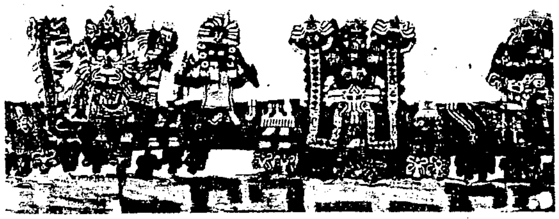

Fig. 9 The border of the mantle (Fig. 8) consists of highly detailed three dimensional cross-knitted figures, a technique developed by the Paracas culture to an extraordinary degree, and highly influential in later South Coast cultures.

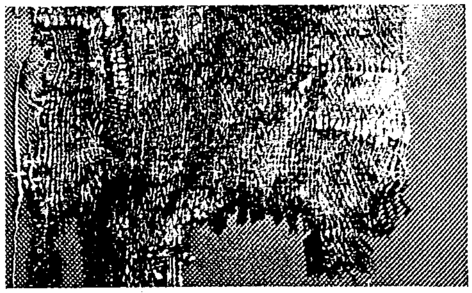

Fig. 10 A textile fragment utilizing warp wrapping from the Chavin levels of the excavations near the Huaca Prieta undertaken by Junius Bird in 1948. AMNH 41.2/3670 ab.

Fig. 11 Two attached textile panels from the Chavin levels of the Huaca Prieta with barely visible design elements created by warp wrapping. AMNH 41.2/3493. The warp selvedge conditions on Chavin deity textile (Fig. 1) may have been similar.

are raised to the upper part of the eye, corresponding to the upturned mouth. In Chavin art, if the pupils are dropped, usually the mouth is downturned or horizontal. If the eyes are raised, so are the corners of the mouth. The ears of the figure are highly stylized.

The detail form characteristics of this front-face image permit a close comparison with the art style sequence established for Chavin by John Rowe (Rowe 1967). In general, this sequence begins with the Lanzon stele or "great image," a three-dimensional sculptured deity still in place in the galleries beneath the oldest Chavin temple. The sequence ends with the two-dimensional engraved image of the elaborately decorated staff god of the Raimondi Stele. This sequence from Phase AB to Phase EF moves from three-dimensional imagery to flat relief and also moves from the early powerful, daemonic representations to docile patterning. Phase D of this series is represented by a flat stone carving (visually similar to a lithographic stone) of a frontal image, standing deity with upturned mouth, top fangs and raised eyes, features which seem to relate him to the image of the textile.

Apparently carved and constructed at about the same time are the main round columns of the temple entrance. Here, the carving, also two-dimensional, is of birds but contains minor face images which have a central fang, something which never occurs in nature. Through the body of the eagle and through his staff runs a continuous mouth band of interlocking teeth. All of these minor design elements are characteristic of Phase D and also occur in the textile under consideration.

Compositionally though, the whole vertical sequence of faces connected by a continuous mouth band relates most closely to the Raimondi Stele of Phase EF. When Raimondi found the piece in a house in the town of Chavin in 1867, he suggested that it might be called the *Genio del Mal* (Raimondi 1873) and noted the elaboration of design themes established in the earlier stele under the temple. This elaboration occurs in the form of a headdress with upside down connected faces.

The absence of any great central image for Phase D, the largest and most important phase of the temple construction, makes exact dating difficult. Perhaps when finer definitions can be obtained for the sequence, the textile may help to define Phase D or the intermediate Phase E.

The remarkable similarity, though, between the stone carving of this highland site and the textiles found on the South Coast assuredly indicates a very close cultural connection. Menzel has already suggested that the painted textiles with Chavin iconography, found at Collango near Ica, may well have come from Chavin (Menzel 1964). The presence of a structurally identical warp-wrapped textile in the Chavin levels near the Huaca Prieta certainly suggests a common source. However, whether brought from Chavin, made locally by people who came from Chavin or simply made locally under strong Chavin direction cannot be ascertained but does not actually alter the significance of the connection.

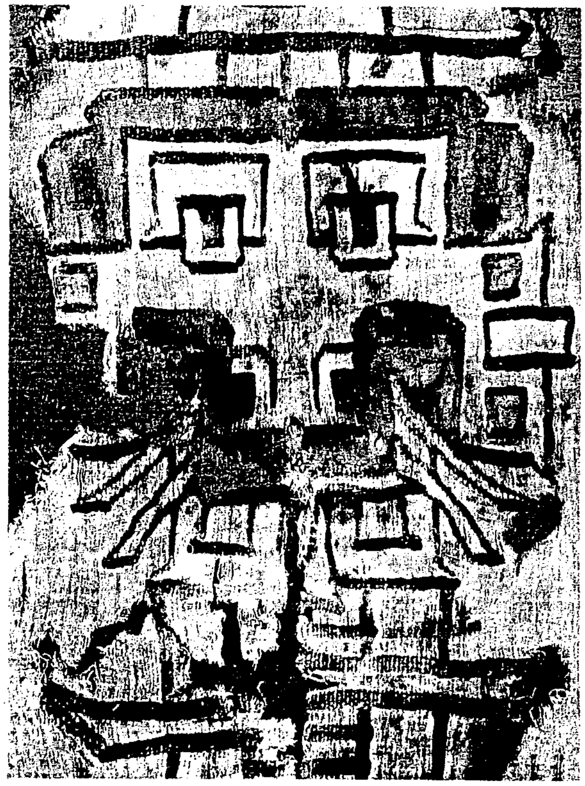

Fig. 12 The repeated face on the Chavin deity textile has five feline fangs, or possibly whiskers, which protrude from the upturned mouth. Beneath the face is a mouth band with the fangs horizontal, a common design element used as a connector in Chavin art.

The textile and also the loosely associated ceramic bowl have no exact counterpart in the design themes of South Coast pottery (Menzel etc. 1964). The Ocucaje pottery sequence for the Ica Valley, though, begins in Phases 1 and 2 with full-face Chavin images with agnathic mouths and other design features which do not recur in later phases. The modular banding of the Ocucaje pottery designs occurs in the later phases 3 to 8. This suggests that this Chavin textile may relate to the earliest Ocucaje phases, 1 and 2 or earlier, or perhaps more likely indicates the relative independence of the style sequences for different types of artifacts.

Conclusions

There are several conclusions which can be proposed from the analysis of this textile and the associated evidence concerning textiles and the Early Horizon.

During the successive phases of Chavin, weaving became increasingly important. The gradual change in sculptural styles toward two-dimensional surfaces may well reflect the growing importance of textile designs. The richly inventive textile techniques developed in the D, E and F Periods show no influence from the coastal pre-ceramic weaving. These techniques include tapestry developed by Phase D and warp wrapping developed by Phase D or E. Warp wrapping was a major structural technique used by Chavin weavers and was thoroughly developed. The characteristics of this weaving technique are surprisingly geometric and mathematical.

Structural techniques as a method of representing images on textiles seem to have slightly preceded painting on textiles. Perhaps these occured in response to the need for the miltiplication and exportation of textiles, the need for portable surfaces to carry the iconographic messages of Chavin to other areas.

In the South Coast, the influence of Chavin weaving seems to have been very great, with the direction of yarn spinning established in the Chavin manner. Even ceramic styles may have been highly influenced by the modular banding of warp-wrapped textiles. Warp wrapping as a remembered technique continued into the first phases of the Nazca sequence where it was used in great ceremonial textiles. Warp wrapping then disappeared, supplanted by embroidery and other techniques, never to occur again in Peruvian weaving history.

William J Conklin, a partner in the architectural firm of Conklin & Rossant, was the architect for the new town of Reston, Virginia. He has traveled extensively in Peru and is a research associate of the Institute of Andean Studies; *Journal* readers are familiar with his article on a "Peruvian Textile Fragment from the Beginning of the Middle Horizon" in the 1970 *Journal*. "Chavin Textiles and the Origins of Peruvian Weaving" this issue's article, was first presented at the 36th annual meeting of the Society for American Archaeology in Norman, Oklahoma, May 8, 1971.

Bibliography

Bennett, Wendell C., and Bird, Junius B.
Andean Culture History. American Museum Science Books, Garden City, New Jersey, 1964.

Benson, Elizabeth P., ed.
Dumbarton Oaks Conference on Chavin. Dumbarton Oaks Research Library and Collection, Washington, D.C., 1971.

Bird, Junius B.
"Before Heddles Were Invented." *Handweaver and Craftsman* (Summer 1952), pp. 5-8.

Bird, Junius B., and Mahler, Joy
"America's Oldest Cotton Fabrics." *American Fabrics*, no. 20 (1951-52), pp. 73-78.

Conklin, William J
"Peruvian Textile Fragment from the Beginning of the Middle Horizon." *Textile Museum Journal*, Washington, D.C. (1970), pp. 15-24.

D'Harcourt, Raoul
Textiles of Ancient Peru and Their Techniques. University of Washington Press, Seattle, 1962.

Emery, Irene
The Primary Structures of Fabrics. The Textile Museum, Washington, D.C., 1966.

King, Mary Elizabeth
"Textiles of the Early Periods." *Textiles and Basketry of the Paracas Period, Ica Valley, Peru*. Ph.D. dissertation, University of Arizona, 1965.

Levillier, Jean
Paracas, A Contribution to the Study of Pre-Incaic Textiles in Ancient Peru. Libreria Hispano-Americana, Paris, 1928.

Lumbreras, Luis Guillermo
"Informe Preliminar Sobre las Galerias Interiores de Chavin." *Revista del Museo Nacional*, T.XXXIV (1965-66), Lima, pp. 143-197.

Menzel, Dorothy; Rowe, John H.; Dawson, Lawrence E.
The Paracas Pottery of Ica: A Study in Style and Time. University of California Publications in American Archaeology and Ethnology, vol. 50 (1964), Berkeley: University of California Press.

O'Neale, Lila M.
"Archaeological Explorations in Peru. Part III Textiles of the Early Nazca Period." *Field Museum of Natural History Anthropology Memoirs*, vol. 2 (1937), Chicago pp. 121-208.

O'Neale, Lila M.
"Textiles" in *Early Ancon and Early Supe Cultures* by Gordon R. Willey and John M. Corbett. Columbia Studies in Archaeology and Ethnology, vol. 3 (1954), New York: Columbia University Press, pp. 84-130.

O'Neale, Lila M.; and Kroeber, A. L.
"Textile Periods in Ancient Peru." University of California Publications in American Archaeology and Ethnology, vol. 28 (1930), Berkeley: University of California Press, pp. 23-56.

Raimondi, A.
El Departamento de Ancachs y Sus Riquezas Minerales. Enrique Meiggs, Lima, Peru, 1873, pp. 212-216.

Roe, Peter
"Rowe Chavin Seriation." working paper, University of Illinois, 1970.

Rowe, John H.
"Form and Meaning in Chavin Art." in *Peruvian Archaeology: Selected Readings* by John H. Rowe and Dorothy Menzel. Peek Publications, Palo Alto, California, 1967, pp. 72-103.

Sawyer, Alan R.
Tiahuanaco Tapestry Design. Museum of Primitive Art, Studies No. 3, New York, 1963.

Wallace, Dwight T.
"Cerillos, An Early Paracas Site in Ica, Peru." *American Antiquity*, vol. 27 (1962), pp. 303-331.